IN THE CLAIMS:

1. (Currently Amended) An apparatus for monitoring conditions downhole ~~deployment valve~~, comprising:

a casing string comprising a downhole deployment valve, wherein the deployment valve is configured to substantially obstruct a bore of the casing string in a closed position and to provide a passageway for a tool to pass through the bore in an open position ~~housing having a fluid flow path therethrough;~~

~~a valve member operatively connected to the housing for selectively obstructing the flow path~~; and

an optical sensor operatively connected to the deployment valve for sensing a wellbore parameter.

2. (Original) The apparatus of claim 1, wherein the wellbore parameter is an operating parameter of the deployment valve.

3. (Original) The apparatus of claim 1, wherein the wellbore parameter is selected from a group of parameters consisting of: a pressure, a temperature, and a fluid composition.

4. (Original) The apparatus of claim 1, wherein the wellbore parameter is a seismic wave.

5. (Original) The apparatus of claim 1, further comprising a control member for controlling an operating parameter of the deployment valve.

6. (Currently Amended) The apparatus of claim 5, wherein the operating parameter is selected from a group of operations consisting of: opening the valve ~~member~~, closing the valve ~~member~~, equalizing a pressure, relaying the wellbore parameter.

7-12. (Canceled)

13. (Original) The apparatus of claim 1, wherein the wellbore parameter is a seismic acoustic wave transmitted into a formation from a seismic source.

14. (Original) The apparatus of claim 13, wherein the seismic source is located within a drill string in a wellbore.

15. (Withdrawn) The apparatus of claim 13, wherein the seismic source is located at a surface of a wellbore.

16. (Withdrawn) The apparatus of claim 13, wherein the downhole deployment valve is located within a first wellbore and the seismic source is located within a second wellbore.

17. (Original) The apparatus of claim 13, wherein the seismic source is a vibration of a wellbore tool against a wellbore.

18-60. (Canceled)

61. (Original) A method for measuring wellbore or formation parameters, comprising:

placing a downhole tool within a wellbore, the downhole tool comprising:

a casing string, at least a portion of the casing string comprising a downhole deployment valve, and

an optical sensor disposed on the casing string; and

lowering a drill string into the wellbore while sensing wellbore or formation parameters with the optical sensor.

62. (Original) The method of claim 61, further comprising adjusting a trajectory of the drill string while lowering the drill string into the wellbore.

63. (Original) The method of claim 61, further comprising adjusting a composition or amount of drilling fluid while lowering the drill string into the wellbore.

64. (Original) The method of claim 61, wherein sensing wellbore or formation parameters with the optical sensor comprises receiving at least one acoustic wave transmitted into a formation from a seismic source.

65. (Original) The method of claim 64, wherein the seismic source transmits the at least one acoustic wave from the drill string to the optical sensor.

66. (Withdrawn) The method of claim 64, wherein the seismic source transmits the at least one acoustic wave from a surface of the wellbore to the optical sensor.

67. (Withdrawn) The method of claim 64, wherein the seismic source transmits the at least one acoustic wave from an adjacent wellbore to the optical sensor.

68. (Original) The method of claim 64, wherein the seismic source transmits the at least one acoustic wave from the drill string vibrating against the wellbore to the optical sensor.

69. (Original) The method of claim 61, further comprising selectively obstructing a fluid flow path within the casing string with the downhole deployment valve while lowering the drill string.

70. (Currently Amended) An apparatus for monitoring conditions within a wellbore or a formation, comprising:

a casing string, at least a portion of the casing string comprising a downhole deployment valve for selectively obstructing a fluid path through the casing string; ~~and~~

at least one optical sensor disposed on the casing string for sensing one or more parameters within the wellbore or formation; and

a control line substantially parallel to an optical line connecting a surface monitoring and control unit to the downhole deployment valve, wherein at least a portion of the control line and the optical line are protected by at least one housing disposed around the casing string.

71. (Original) The apparatus of claim 70, wherein the at least one optical sensor comprises at least one of a seismic sensor, acoustic sensor, pressure sensor, or temperature sensor.

72. (Original) The apparatus of claim 70, further comprising a seismic source for transmitting at least one acoustic wave into the formation for sensing by the optical sensor.

73. (Original) The apparatus of claim 72, wherein the seismic source is disposed within a drill string within the casing string.

74. (Withdrawn) The apparatus of claim 72, wherein the seismic source is disposed at a surface of a wellbore.

75. (Withdrawn) The apparatus of claim 72, wherein the seismic source is disposed in an adjacent wellbore.

76. (Original) The apparatus of claim 72, wherein the seismic source is vibration of a drill string within the casing string.

77. (Original) The apparatus of claim 70, further comprising additional optical sensors disposed on the outside of the casing string and in communication with an optical line for monitoring conditions at different locations within the wellbore or formation.

78. (Canceled)

79. (Canceled)

80. (Original) The apparatus of claim 70, wherein the casing string further comprises a flow meter having one or more optical sensors thereon for measuring at least one of a flow rate of a fluid flow through the casing string or a composition of the fluid.

81. (Currently Amended) A method for permanently monitoring at least one wellbore or formation parameter, comprising:

placing a casing string within a wellbore, at least a portion of the casing string comprising a downhole deployment valve with at least one optical sensor disposed therein;

operating the deployment valve between closed and open positions, wherein the closed position substantially obstructs a bore of the casing string and the open position provides a passageway for a tool to pass through the bore; and

sensing at least one wellbore or formation parameter with the optical sensor.

82. (Original) The method of claim 81, wherein a seismic source transmits at least one acoustic wave into the formation for sensing by the at least one optical sensor.

83. (Withdrawn) The method of claim 82, wherein the seismic source is disposed at a surface of the wellbore.

84. (Withdrawn) The method of claim 83, wherein the seismic source is moved to at least two locations at the surface to transmit a plurality of acoustic waves into the formation.

85. (Original) The method of claim 81, wherein the at least one wellbore or formation parameter comprises microseismic measurements.

86. (Original) The method of claim 81, wherein the at least one optical sensor comprises at least one of a seismic sensor, pressure sensor, temperature sensor, or acoustic sensor.

87. (Original) The method of claim 81, wherein the casing string further comprises a flow meter and wherein the flow meter senses at least one of a flow rate of fluid or a composition of the fluid.

88. (Original) A method for determining flow characteristics of a fluid flowing through a casing string, comprising:

providing a casing string within a wellbore comprising a downhole deployment valve and at least one optical sensor coupled thereto;

measuring characteristics of fluid flowing through the casing string using the at least one optical sensor; and

determining at least one of a volumetric phase fraction for the fluid or flow rate for the fluid based on the measured fluid characteristics.

89. (Original) The method of claim 88, wherein the fluid is introduced while drilling into a formation.

90. (Original) The method of claim 89, further comprising adjusting the flow rate of the fluid while drilling into the formation.

91. (Original) The method of claim 89, further comprising using at least one of the volumetric phase fraction or the flow rate to determine formation properties while drilling into the formation.

92. (Previously Presented) An apparatus for determining flow characteristics of a fluid flowing through a casing string in a wellbore, comprising:

a casing string comprising a downhole deployment valve; and

at least one optical sensor coupled to the casing string for sensing at least one of a volumetric phase fraction of the fluid or a flow rate of the fluid through the casing string.

93. (Original) The apparatus of claim 92, wherein the fluid comprises drilling fluid introduced into the casing string while drilling into a formation.

94. (Currently Amended) The apparatus of claim 92, wherein the casing string further comprises one or more optical sensors attached thereto for ~~sensing~~ detecting the position of the downhole deployment valve.

95. (New) An apparatus for downhole monitoring, comprising:

a casing string comprising a downhole deployment valve, the deployment valve comprising:

a housing having a fluid flow path therethrough;

a valve member operatively connected to the housing for selectively obstructing the flow path; and

an optical sensor physically connected to the housing, wherein the sensor is adapted to enable sensing a seismic wave.

96. (New) The apparatus of claim 95, further comprising a seismic source for transmitting the seismic wave into a formation.